APPENDIX H: PROCEDURE FOR CONDUCTING WIPE TEST

1 MATERIALS

1.1 Seven sterile cotton swabs

1.2 Conical tubes, 15 mL

1.3 Microcentrifuge tubes, 1.5 mL

2 REAGENTS

2.1 Type I Water

3 SUPPLIES

3.1 Sterile Scalpel

4 PROCEDURE

4.1 Remove seven sterile cotton swabs from the container and slightly moisten all seven of the cotton swabs with Type 1 water.

4.2 Using one of the moistened swabs wipe the inside of the PCR Setup Hood with the swab. Place the moist swab in a labeled 15 mL conical tube. (This sample will be amplified to mimic possible DNA that could contaminate the sample DNA during the PCR setup).

4.3 Using a second moistened swab wipe the outside surface of a SA 43 vertical electrophoresis tank and the upper and lower reservoirs with the swab. Place the moist swab in a labeled 15 mL conical tube.

4.4 Using the third moistened swab wipe the door hands to the PCR Amplification Room with the swab. Place the moist swab in a labeled 15 mL conical tube.

4.5 Using the fourth moistened swab wipe the inside of several of the wells in one of the 9600 Thermal Cyclers with the swab. Place the moist swab in a labeled 15 mL conical tube.

4.6 Using the fifth moistened swab wipe approximately a 3 foot area of the bench top with the swab. Place the moist swab in a labeled 15 mL conical tube.

4.7 Using the sixth moistened swab wipe the outside surface of the Type 1 water, 0.5 X TBE or 1.0 X TBE carboy with the swab. Place the moist swab in a labeled 15 mL conical tube.

4.8 Place the seventh moistened swab containing only Type 1 water (control swab) into a labeled 15 mL conical tube.

4.9 After all seven swabs have been collected, label seven 1.5 mL microcentrifuge tubes to correspond to the areas from where the swabs were taken. Punch 2-3 holes in the lid of each tube. Using a sterile scalpel remove the cotton portion of the swab and place in the lid. Spin the tube for 5 minutes in a microcentrifuge at 10,000 - 15,000 rpm to remove the liquid from the swab. Alternatively, a Spin-Ease basket may be used instead of placing the cutting in the lid of the tube.

4.10 Remove the lid containing the swab and discard. Place a new lid on the tube containing the liquid.

4.11 The sample collected from the PCR Setup Hood will be amplified following the procedure outlined in the Fluorescent Detection PCR-Based STR DNA Protocol PowerPlex® 16 BIO Systems Manual.

4.12 Using 2.5 µL of the liquid collected from each swab and 2.5 µL of the amplified sample from the PCR Setup Hood and corresponding positive and negative amplification controls, mix each sample with either Internal Lane Standard 400 or 600 and type the samples according to the procedure outlined in the Commonwealth of Virginia Division of Forensic Science Forensic Biology Section Manual, Section III, Fluorescent Detection PCR-Based STR DNA Protocol PowerPlex® 16 BIO System. Include corresponding PowerPlex® 16 BIO Allelic Ladder lanes on the gel.

4.13 Wipe test will be conducted on a monthly basis and the results will be recorded as a permanent record. If a positive wipe test is determined, all amplifications/typings will be discontinued until this area has been thoroughly cleaned.

♦**END**